CLAIMS

What is claimed is:

1. A computer-implemented method for determining a set of materials for constructing a wood frame building, comprising:

selecting a plurality of parameters for the wood frame building;

accessing a database having information about a set of raw and finished goods;

determining the set of materials based on the plurality of parameters for the wood frame building and the information about the set of raw and finished goods; and

displaying the set of materials.

2. The computer-implemented method of claim 1, wherein selecting a plurality of parameters for the wood frame building comprises selecting a plurality of parameters for walls, selecting a plurality of parameters for a roof, and selecting a plurality of parameters for at least one building opening.

3. The computer-implemented method of claim 2, further comprising displaying a visual model of at least one aspect of the wood frame building.

4. The computer-implemented method of claim 3, wherein displaying a visual model includes displaying a plurality of dimensions for the at least one aspect of the wood frame building.

5. The computer-implemented method of claim 2, wherein selecting a plurality of parameters for the wood frame building includes selecting a material layer for the walls.

6. The computer-implemented method of claim 2, wherein selecting a plurality of parameters for the wood frame building includes selecting a material layer for the roof.

7. The computer-implemented method of claim 2, wherein selecting a plurality of parameters for the wood frame building further comprises selecting a plurality of parameters for poles.

8. The computer-implemented method of claim 7, further wherein selecting a plurality of parameters for poles includes selecting a wood species, size and spacing for the poles.

9. The computer-implemented method of claim 7, further wherein selecting a plurality of parameters for poles includes selecting a spacing type for the poles.

10. The computer-implemented method of claim 2, wherein selecting a plurality of parameters for the wood frame building includes selecting the height, width and length of the wood frame building.

11. The computer-implemented method of claim 2, wherein selecting a plurality of parameters for the wood frame building further comprises selecting a plurality of parameters for trusses.

12. The computer-implemented method of claim 2, wherein selecting a plurality of parameters for the wood frame building further comprises selecting a plurality of parameters for a foundation.

13. The computer-implemented method of claim 1, wherein selecting a plurality of parameters for the wood frame building includes determining whether at least one selected parameter is within a range of selected values, the range of selected values having substantially feasible alternatives for the at least one selected parameter, further wherein the range of selected values may be governed by at least one previously selected parameter; and

if the at least one selected parameter is not within the range of selected values, indicating that the at least one selected parameter is not within the range of selected values.

14. The computer-implemented method of claim 13, further comprising, after indicating that the at least one selected parameter is not within the range of selected values, cyclically repeating the above steps until the at least one selected parameter is within the range of selected values.

15. The computer-implemented method of claim 14, further wherein the range of selected values includes substantially feasible alternatives for numeric dimensions.

16. The computer-implemented method of claim 14, further wherein the range of selected values includes substantially feasible alternatives for materials.

17. The computer-implemented method of claim 14, further wherein the range of selected values may be governed by the information in the database concerning the existence of suitable goods in the database.

18. The computer-implemented method of claim 3, wherein displaying a visual model includes displaying a wall of the wood frame building having a plurality of metal panels, and displaying the location on the wall of each metal panel.

19. The computer-implemented method of claim 18, further comprising displaying an identity for each metal panel.

20. The computer-implemented method of claim 19, further comprising corresponding by identity each metal panel to a list of the plurality of metal panels, and displaying a parameter of each metal panel in the list.

21. The computer-implemented method of claim 18, further comprising indicating at least one building opening.

22. The computer-implemented method of claim 18, wherein selecting a plurality of parameters for walls includes selecting a layout for the plurality of metal panels, further wherein a metal panel has a nominal width and a longitudinal edge, and displaying the longitudinal edge substantially aligned with a side of a gable end of the wood frame building.

23. The computer-implemented method of claim 18, wherein selecting a plurality of parameters for walls includes selecting a layout for the plurality of metal panels, further wherein a metal panel has a nominal width and a longitudinal edge, and displaying the longitudinal edge substantially aligned with a peak of a gable end of the wood frame building.

24. The computer-implemented method of claim 3, wherein displaying a visual model includes displaying an individual metal panel for a wall of the wood frame building and displaying the final dimensions of the individual metal panel.

25. The computer-implemented method of claim 3, wherein displaying a visual model includes displaying a floor plan of the wood frame building and indicating in the floor plan the location, height and width of an overhead door for the wood frame building.

26. The computer-implemented method of claim 3, wherein displaying a visual model includes displaying a floor plan of the wood frame building and indicating in the floor plan substantially the distance between opposite corners of the wood frame building.

27. The computer-implemented method of claim 3, wherein displaying a visual model includes displaying a wall of the wood frame building having a horizontally oriented member, and displaying the original board length of the horizontally oriented member substantially upon the horizontally oriented member wherein the original board length is the length of the lumber component as supplied and before the lumber component is cut to a selected length.

28. The computer-implemented method of claim 1, wherein displaying the set of materials includes displaying the original board length of a lumber component, wherein the original board length is the length of the lumber component as supplied and before the lumber component is cut to a selected length.

29. The computer-implemented method of claim 3, wherein displaying a visual model comprises displaying a wall of the wood frame building having a plurality of vertically oriented poles, wherein the plurality of vertically oriented poles have sides facing the wall, and displaying the sides facing the wall in proportion to the dimensions of the sides facing the wall.

30. The computer-implemented method of claim 3, wherein displaying a visual model includes displaying a distance substantially between each of a plurality of poles for a wall, wherein the sum of the distance substantially between each of the plurality of poles for the wall is equal to the nominal building dimension for the wall minus the combined nominal thicknesses of two wall girts.

31. The computer-implemented method of claim 3, wherein displaying a visual model includes displaying a distance between the opposite sides of poles for a wall, wherein the poles are respectively at each side of the wall, further wherein the distance is the nominal building dimension for the wall minus the combined nominal thicknesses of two wall girts.

32. The computer-implemented method of claim 1, wherein displaying the set of materials includes displaying the total cost of the trusses for the wood frame building.

33. The computer-implemented method of claim 1, wherein displaying the set of materials includes displaying the quantity of cement for the wood frame building.

34. The computer-implemented method of claim 1, wherein displaying the set of materials includes displaying the ratio of perforated soffit panels to solid soffit panels selected by the user.

35. The computer-implemented method of claim 3, wherein displaying a visual model comprises displaying a plurality of wall girts of the wood frame building, and shading substantially every other wall girt, wherein the location of each wall girt is readily apparent to the user.

36. The computer-implemented method of claim 1, wherein determining the set of materials includes determining that a first lumber component has an original board length sufficient for the length of the first lumber component and the length of a second lumber component, and further wherein displaying the set of materials includes displaying information for the second lumber component wherein the user can observe that the first lumber component has an original board length sufficient for the length of the first and second lumber components, wherein efficient use of lumber is promoted.

37. The computer-implemented method of claim 1, wherein determining the set of materials includes determining the nominal length dimensions for a plurality of metal panels for the walls, wherein the nominal length dimensions are sufficient for completing the fabrication of each metal panel, and further wherein displaying the set of materials includes displaying the nominal length dimensions.

38. The computer-implemented method of claim 3, wherein displaying a visual model comprises displaying the truss loading parameters selected for the wood frame building.

39. The computer-implemented method of claim 3, wherein displaying a visual model comprises displaying a vertical distance from a reference point to a bottom edge of a metal panel when the metal panel is attached to the wood frame building.

40. The computer-implemented method of claim 3, wherein displaying a visual model comprises displaying a vertical distance from a reference point to a top surface of a finished floor of the wood frame building.

41. The computer-implemented method of claim 3, wherein displaying a visual model comprises displaying a vertical distance from a reference point to a top surface of a finished earth grade of the wood frame building.

42. The computer-implemented method of claim 3, wherein displaying a visual model comprises displaying a vertical distance from a reference point to a top surface of a skirt board attached to a wall of the wood frame building.

43. The computer-implemented method of claim 39, wherein the reference point is a top surface of a skirt board attached to a wall of the wood frame building.

44. The computer-implemented method of claim 40, wherein the reference point is a top surface of a skirt board attached to a wall of the wood frame building.

45. The computer-implemented method of claim 41, wherein the reference point is a top surface of a skirt board attached to a wall of the wood frame building.

46. The computer-implemented method of claim 3, wherein displaying a visual model comprises displaying a view of at least a portion of a plurality of components of the wood frame building near the top of a wall.

47. The computer-implemented method of claim 3, wherein displaying a visual model comprises displaying an overhang distance by a roof of a wall for the wood frame building.

48. The computer-implemented method of claim 1, wherein determining the set of materials comprises selecting goods for the set of materials from the set of raw and finished goods according to a predetermined order of preference.

49. A computer program product comprising a computer usable medium having computer readable program code means embodied in the medium for causing an application program to execute on a computer that determines a set of materials for constructing a wood frame building, the computer readable program code means comprising:

first computer readable program code means for causing the computer to select a plurality of parameters for the wood frame building;

second computer readable program code means for causing the computer to access a database having information about a set of raw and finished goods;

third computer readable program code means for causing the computer to determine the set of materials based on the plurality of parameters for the wood frame building and the information about the set of raw and finished goods; and

fourth computer readable program code means for causing the computer to display the set of materials.

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